

July 2004

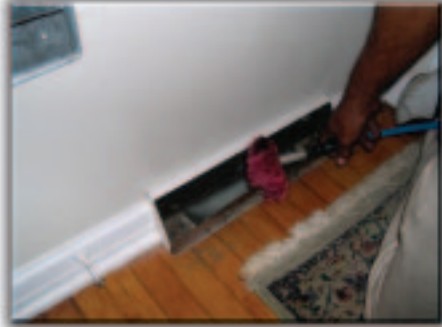
From My Home to Yours

Karla Woodard, Greensboro Marketing Representative

This month our newsletter takes a different twist. I am not a trained technician, Certified Mold Remediator (CMR) or and Indoor Air Quality (IAQ) specialist. I'm simply a Mom – albeit a tenacious one.

My daughter was sick off and on throughout the fall, winter and spring with colds, bronchitis and a lingering cough. At the time, her illnesses were easily attributed to her increased exposure to other children in pre-school and a tough cold and flu season. As her

lingering cough and recurring bronchitis continued into the Spring, our pediatrician began to suspect allergies/asthma rather than a viral cause. It wasn't until my daughter's teacher commented on how she had been sick since October – more than any of the other children, that I started



The vents are cleaned using agitating brushes and a HEPA vacuum.

to explore other potential causes: her immune system, allergies, home environment, neighborhood air quality.

For the past three and a half years I have rented a small, post-WWII mill house in wonderful condition with a terrific landlord who does HVAC for a living. Somewhere in the last year I started to notice small things:

- The walls were discolored in certain areas (particularly in corners up near the ceiling).
- There was more dust, and a greasy film to the dust, especially on my TV screen and dishes in the cupboard.
- My previously pristine white, room darkening shades and sheers and the hair on my daughter's dolls were now a dingy gray.
- The HVAC filters were filthy and black within 30 days of changing and the intake unit had lots of dust bunnies around the filter.

I inquired about possible causes—the gas heat or lack of a kitchen exhaust fan. My landlord assured me the system, only eight years old, was in good working order and that gas heat does not leave a residue. He asked me if I burned candles – the answer being yes, a few small ones on an occasional basis. As he thought candles might be the cause, I stopped burning them. After all, he was the expert not me. We woke up one winter morning to no heat—we could hear the

motor running, but no heat came out. Evidently it was a switch or the fan, but our landlord fixed the problem within 24 hours and said he checked out the system to make sure there were no cracks or problems with the unit.

It wasn't until I moved my daughter into a larger room taking down pictures and mirrors that I noticed how much discoloration had occurred throughout the winter and spring months. I was determined to figure out what had caused the discoloration and the greasy residue. Fortunately, I work for **AFTERDISASTER®** and have a wealth of resources to turn to for answers.

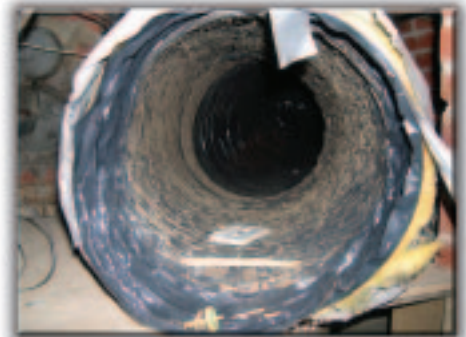
Our IAQ manager came to my home and looked at the pattern of the residue on the walls. He inspected the intake unit and it was filthy, lined with a greasy residue. He then inspected several registers which were equally filthy. The diagnosis, a puff-back. The initial puff-back probably occurred when we turned on the heat last October. Since then, the system has been continuously blowing out a dirty, greasy residue along with the usual contaminants of a dirty duct system.



Debris & greasy dust block airflow inside the kitchen register.



The HEPA vacuum is attached to the heating system under the house.

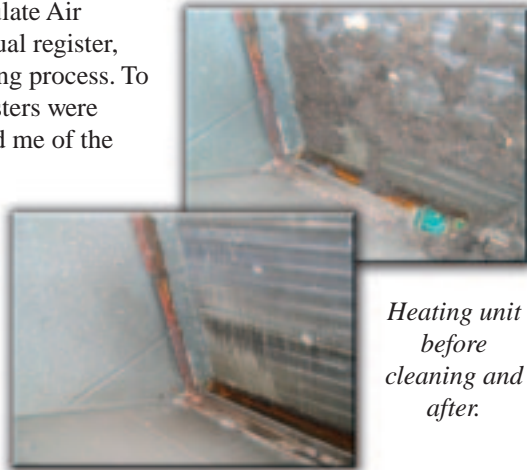


Dirty flexible ductwork.

over

Having never observed an IAQ job, I photographed the process with my digital camera (*though usually, the entire process is videoed, before, during and after the cleaning*). The technicians started by laying protective cloths throughout the traffic areas. The registers were then removed and cleaned followed by the large intake unit. Using a High Efficiency Particulate Air (HEPA) Vacuum, they cleaned each individual register, which proved to be a tedious, time consuming process. To effectively clean each register all other registers were covered with a heavy material that reminded me of the cover you wear when having X-rays taken. This created a vacuum effect, maximizing the suction to that individual register.

One technician had an especially tough (*and hot – it was 95° that day!*) job crawling under the house to cut holes in the ductwork every 20 feet to agitate and suction the piles of dirt and debris accumulated around corners and at various intervals. (*When asked how I would describe the duct work cleaning process, I likened it to the brushes used in a car wash, except air pressure is used instead of water!*) Once all the dirt had been suctioned into the HEPA vac, the gas heating unit's blower and grillwork were cleaned. Though fortunately no mold had been detected in the system, Microban, an antimicrobial, was sprayed into the ductwork as a preventive measure. The holes in the ductwork were sealed and the insulation surrounding the ductwork was patched and sealed. The blower was reattached and the heating unit closed up. Lastly, the registers were reinstalled and the paint was touched-up. After loading up the truck the technicians conducted a walk-through to make sure the furniture had been put back and the house was in



Heating unit before cleaning and after.



Some of the ??? dust & dirt removed from the ductwork during cleaning.

it's original condition—well, except for my newly cleaned ductwork!

Knowing my ductwork was now spotless motivated me to thoroughly clean my entire house to remove any lingering trace of dust on the furniture and floors. I also washed curtains and scrubbed mini-blinds. Finally I collapsed into bed exhausted after an eventful day to find I was actually COLD! The thermostat was set at its normal temperature, but the air flow coming out of the register was much stronger than before. As an added bonus it looks like we will be saving on our electric bill.

Now to answer the question, I'm sure you have all been wondering- What happened to my daughter's symptoms? They gradually improved until I noticed that she was symptom free after 10 days. I also noticed my allergies are considerably milder than before. A friend recently came over to visit (and not a particularly observant friend) and commented that my house smelled a lot cleaner and fresher. What a coincidence, since she had been out of town and had no idea I had just had my duct work cleaned.

AfterThoughts® newsletters are intended to be a useful source of information to our readers. We welcome your opinions on articles in our publication, as well as suggestions for future articles. Please send correspondence via fax 1-336-855-1144 or e-mail to Jan.Barham@AFTERDISASTER.com.

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Questions you may be asking...

WHAT IS A PUFF-BACK?

This is a malfunction of a combustion heating system (natural gas, LP gas, oil). The malfunction is normally a result of a breach in the combustion chamber, which allows the by product (soot or smoke) to enter the air handling system. The soot or smoke is then distributed throughout the air duct system and discharged into the building.

HOW OFTEN DOES THE DUCTWORK NEED TO BE CLEANED.

Check with your physician first. However, most systems do not need to be cleaned more than once per year.

IF YOU HAVE YOUR HVAC SYSTEM SERVICED ANNUALLY, SHOULD YOU EVER NEED A DUCT CLEANING?

Yes, because servicing the system typically includes checking the air handling unit, not the duct system.

DOES HAVING A SYSTEM UNDER THE HOUSE MAKE YOU MORE SUSCEPTIBLE TO DIRT & MOLD GETTING INTO YOUR SYSTEM?

Only if there is a breach in the duct system, the return air lines, or the air handling unit.

IF NO ONE IN MY HOUSE HAS ANY ALLERGIES OR RESPIRATORY PROBLEMS, WHY DO I NEED TO CLEAN MY DUCTWORK?

Simply for sanitation. Hair, dried skin, dust and debris are introduced into the air handling system through the return air vents.